SUBSTITUTE SPECIFICATION

1   TUNABLE NARROW-BAND FILTER INCLUDING

2   SIGMA-DELTA MODULATOR

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4   Christopher H. Dick

5   Frederic J. Harris

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7   ABSTRACT OF THE DISCLOSURE

8   Sigma-delta modulation ($\Sigma\Delta$M) techniques provide a range

9   of opportunities in a signal processing system for both

10   increasing performance and datapath optimization along the

11   silicon-area axis in the design space. $\Sigma\Delta$M technology,

12   together with FPGA based signal processing hardware, can be

13   combined to produce creative, high-performance and area-

14   efficient solutions to many signal processing problems.